

## IN THE SPECIFICATION

Kindly change the paragraph starting at page 38, line 16 as follows:

Fig. 7 shows a three dimensional sketch of a preferred embodiment that consists of two parallel spectrometer channels. In the preferred embodiment shown in Fig. 7, the dual channel spectrometer comprises of a measurement channel 41a to measure light from the object 15 and a reference channel 41b to measure light from the reference light source 38 (not shown in Fig. 7). The light enters each spectrometer channel through an aperture, in this example rectangular slits (40a, 40b), and each channel is an independent transmission spectrometer having respective diffractive optical elements (42a and 42b) and working according to the ray-tracing simulation illustrated in Fig.3 with the exception that that the aspheric mirrors (43a, 43b) now focus the diffracted wavelengths across the detecting means (44a, 44b) which is now positioned at the exit surface.

Kindly change the paragraph starting at page 40, line 15, as follows:

Figure 10 shows another cross-sectional sketch of a preferred embodiment in which a dual channel spectrometer, having an aspheric mirror 43, is combined with a distance sensing means. This embodiment has been used for the examples described below, and includes additionally a base plate 61 that guides part of the reference light 68 to the reference channel. Additionally, the base plate contains the focusing means 62 for the distance sensing means. The base plate 61, spectrometer unit 41, and detecting means 44 are aligned with respect to each other in a specially fabricated box (not shown here).

Kindly change the paragraph starting at page 41, line 23, as follows:

Fig. 12 shows a three dimensional sketch of another preferred embodiment in which a dual channel spectrometer, having diffractive optical elements 42 and aspheric mirrors 43, is combined with a distance sensing means. This preferred embodiment is a planar version of the embodiment

illustrated in Figs. 10 and 11. In this preferred embodiment, all reflective surfaces are placed below the respective faces of the front side and back side of the spectrometer and the base plate.